

### REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1, 3-8, and 10-21 are pending in this application, Claims 2 and 9 having been canceled without prejudice or disclaimer; and Claims 1, 3-8, 10, 11, 13, 17, and 21 having been presently amended. Support for amended Claims 1, 3-8, 10, 11, 13, 17, and 21 can be found, for example, in the original claims, drawings, and specification as originally filed.<sup>1</sup> No new matter has been added.

In the outstanding Office Action, Claims 10 and 21 were rejected under 35 U.S.C. § 101; Claims 1, 5, 7, 8, 10-14, and 16-21 were rejected under 35 U.S.C. § 103(a) as unpatentable over Balan (U.S. Patent No. 7,218,741) in view of Marash (WO 01/37435); and Claims 6 and 15 were rejected under 35 U.S.C. § 103(a) as unpatentable over Balan in view of Marash and Sim (U.S. Patent No. 6,771,219). Claims 2-4 and 9 were indicated as allowable if rewritten in independent form.

Applicants acknowledge with appreciation the indication of allowable subject matter. In light of this indication, Claim 1 has been amended to include features of allowable Claim 2 and Claim 8 has been amended to include features of allowable Claim 9. Thus, Applicants respectfully submit that Claims 1-10 are patentable.

In regard to the rejection of Claims 10 and 21 under 35 U.S.C. § 101, Applicants have amended these claims to recite a computer-readable storage medium storing therein a sound acquisition program. MPEP § 2106 IV.B.1(a) states that:

. . . a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit

---

<sup>1</sup> See page 25, line 15 to page 26, line 4, and page 30, line 25 to page 34, line 12 of the specification; and Figures 10, 12, and 13.

the computer program's functionality to be realized, and is thus statutory.

In view of the presently submitted claimed amendments and foregoing comments Applicants respectfully submit that Claims 10 and 21 define statutory subject matter. Accordingly, Applicants respectfully request that the rejection under 35 U.S.C. § 101 be withdrawn.

In regard to the rejection of Claims 11-21 under 35 U.S.C. § 103(a), Applicants respectfully submit that amended Claim 11 recites novel features clearly not taught or rendered obvious by the applied references.

Independent Claim 11 is directed to a sound acquisition method including, *inter alia*:

***...a filter coefficient calculating step of calculating filter coefficients for said acquired signal of said at least one channel and filter coefficients for said received signal based on said stored covariance matrices in said utterance period and said receiving period so that an echo component of the received signal contained in said acquired signal is cancelled;***

a filtering step of filtering said received signal and said acquired signal by use of said filter coefficients for said received signal and said filter coefficients for said acquired signal of said at least one channel; and

an adding step of adding together all of said filtered signals and providing the added output as a send signal.

Independent Claim 17 recites substantially similar features as independent Claim 11. Thus, the arguments presented below with respect to Claim 11 are also applicable to Claim 17.

Applicants respectfully submit that the cited references fail to teach or suggest "a filter coefficient calculating step of calculating filter coefficients for said acquired signal of said at least one channel and filter coefficients for said received signal based on said stored covariance matrices in said utterance period and said receiving period so that an echo component of the received signal contained in said acquired signal is cancelled," as in

Applicants' independent Claim 11, as none of the cited references describe Applicants' claimed echo cancellation.

Page 4 of the outstanding Office Action states that page 24, line 21 to page 26, line 8 of Marash describes a system for beamforming design that performs echo cancelling. However, page 24, line 21 to page 25, line 6 of Marash merely describes the calculation of filter coefficients using simulated noise for an adaptive beamforming system disposed in an anechoic chamber (i.e. echoless chamber). Marash does not describe that an echo component of a received signal contained in an acquired signal is cancelled, as recited in Claim 11.

In addition, Applicants respectfully submit that the references fail to describe the processing of the received signal as recited in Claim 11, as Claim 11 recites processing of the received signal which is not stemmed from the microphones, but rather is received as an electric signal (or transmission signal) from outside.

Thus, Applicants respectfully submit that independent Claims 11 and 17 patentably distinguish over the cited references.

Accordingly, Applicants respectfully request the rejection under 35 U.S.C. § 103(a) be withdrawn.

Consequently, in view of the present amendment, and in light of the above discussion, the pending claims as presented herewith are believed to be in condition for formal allowance, and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.



---

James J. Kulbaski  
Attorney of Record  
Registration No. 34,648

Customer Number

**22850**

Tel: (703) 413-3000  
Fax: (703) 413-2220  
(OSMMN 08/07)

Derek P. Benke  
Registration No. 56,944

I:\ATTY\DPB\26's\261119US\261119US-AM.DOC